

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: NEO-RAY

Report Number: P242816

Luminaire Tested: **S125DR-S610D840-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242816
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-22)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-S610D840-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2410.4 lumens
Efficiency: N/A
Efficacy: 128.2 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

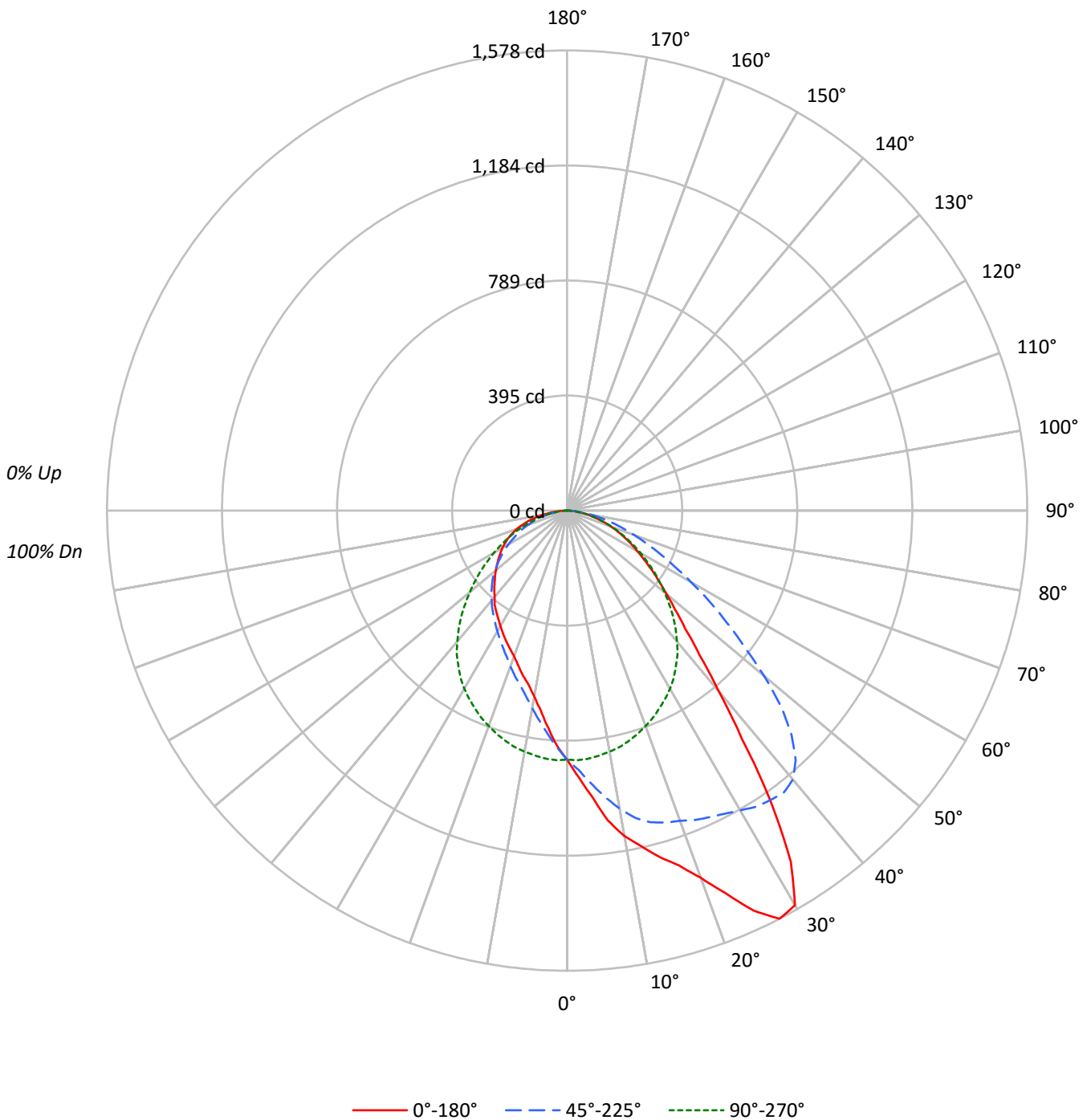
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	98	90	84	79	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	78	65	56	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6070	6070	6070
5°	7030	6091	5334
10°	8179	6059	4673
15°	9054	6015	4311
20°	10134	5945	4020
25°	11873	5865	3878
30°	12823	5787	3755
35°	10544	5640	3674
40°	7494	5436	3586
45°	5757	5160	3535
50°	4915	4819	3527
55°	4375	4483	3558
60°	3947	4118	3649
65°	3646	3750	3744
70°	3314	3369	3797
75°	2927	2966	3762
80°	2464	2419	3442
85°	1949	1745	2781



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.2	3.4
10°-20°	244.9	10.2
20°-30°	397.8	16.5
30°-40°	486.1	20.2
40°-50°	441.0	18.3
50°-60°	351.2	14.6
60°-70°	244.6	10.1
70°-80°	130.3	5.4
80°-90°	32.3	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	724.8	30.1
0°-40°	1210.9	50.2
0°-60°	2003.1	83.1
0°-90°	2410.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2410.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	854	854	854	854	854	
5°	985	939	854	768	748	99
15°	1230	1106	818	620	586	352
25°	1514	1160	748	520	494	694
35°	1215	1213	650	440	423	746
45°	573	1088	513	364	352	456
55°	353	667	362	278	287	317
65°	217	354	223	187	223	215
75°	107	157	108	99	137	115
85°	24	32	21	23	34	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1
2.5°	915.8	914.3	912.9	910.0	912.1	906.0	903.1	898.0	891.8	889.7	887.1
5°	985.4	987.2	989.0	981.4	982.1	977.0	965.4	956.0	948.4	938.6	931.7
7.5°	1071.7	1066.2	1066.6	1061.9	1053.5	1046.6	1035.4	1019.8	1005.7	989.7	976.0
10°	1133.3	1133.7	1130.4	1124.6	1115.5	1109.0	1093.1	1077.8	1059.3	1037.6	1022.0
12.5°	1179.7	1181.5	1177.2	1168.8	1165.6	1148.9	1137.3	1118.4	1095.6	1079.3	1053.5
15°	1230.5	1226.5	1223.6	1213.8	1206.2	1190.9	1171.0	1152.1	1128.2	1106.1	1084.0
17.5°	1275.4	1278.7	1274.0	1266.7	1244.2	1226.5	1201.8	1177.9	1149.2	1121.7	1096.0
20°	1339.9	1342.8	1334.5	1318.9	1290.6	1272.9	1237.7	1204.4	1169.9	1131.8	1102.8
22.5°	1420.4	1416.8	1404.8	1379.1	1355.5	1318.9	1280.1	1237.7	1192.4	1148.2	1107.2
25°	1514.0	1498.7	1491.8	1462.5	1430.2	1382.0	1329.8	1270.3	1216.7	1159.8	1110.5
27.5°	1577.8	1571.6	1561.8	1537.9	1500.9	1446.2	1384.5	1313.5	1241.3	1171.7	1109.7
30°	1562.5	1563.3	1564.0	1557.5	1535.7	1496.9	1435.6	1357.7	1267.8	1186.9	1112.3
32.5°	1427.7	1444.0	1459.6	1479.9	1492.9	1493.3	1460.7	1392.1	1299.0	1204.4	1110.8
35°	1215.2	1219.2	1260.2	1300.8	1355.9	1398.7	1427.3	1396.1	1318.2	1212.7	1109.7
37.5°	982.5	1002.4	1033.2	1078.9	1161.6	1229.0	1317.5	1347.9	1311.3	1219.6	1109.4
40°	807.7	825.9	844.4	891.1	958.2	1044.5	1148.5	1237.3	1258.0	1204.4	1098.5
42.5°	672.9	686.3	707.3	739.6	792.9	866.8	965.1	1088.0	1172.1	1160.1	1075.6
45°	572.8	581.9	597.8	625.7	666.3	726.2	813.9	940.8	1051.4	1088.0	1036.9
47.5°	501.8	502.1	515.2	535.1	565.9	621.0	686.6	791.1	910.3	994.8	982.8
50°	444.5	442.7	452.4	469.1	492.3	526.0	588.0	667.4	780.9	879.9	907.4
52.5°	395.2	395.9	401.0	412.2	430.7	458.2	500.7	570.3	663.1	765.3	823.3
55°	353.1	351.7	358.5	366.9	381.0	399.9	433.2	488.0	566.6	666.7	734.1
57.5°	312.5	316.5	319.4	325.2	337.5	350.6	380.3	422.4	487.3	576.1	647.5
60°	277.7	281.7	283.9	289.7	299.1	310.0	331.7	364.4	416.9	490.9	561.6
62.5°	246.5	249.4	249.8	254.9	262.1	272.6	288.6	314.7	353.5	415.8	484.7
65°	216.8	216.8	218.2	223.7	227.3	236.7	249.8	269.7	303.1	353.5	412.6
67.5°	187.8	189.6	189.2	191.8	195.0	203.0	212.8	229.5	256.0	294.0	343.0
70°	159.5	161.0	160.6	162.4	166.0	170.8	178.4	194.0	211.7	243.3	283.9
72.5°	134.1	134.5	133.4	136.0	137.8	141.8	150.5	157.0	173.3	198.7	230.2
75°	106.6	107.3	108.0	109.5	111.7	113.8	118.2	126.5	137.4	157.3	178.7
77.5°	84.8	83.0	85.2	84.8	85.9	87.7	91.7	96.4	105.9	119.3	137.0
80°	60.2	60.5	60.5	60.9	62.7	63.8	67.1	70.3	77.2	86.6	98.2
82.5°	39.9	41.0	40.2	41.0	42.4	43.1	44.6	47.1	50.4	57.3	64.9
85°	23.9	22.1	22.8	23.6	23.6	23.9	25.4	26.5	28.6	31.5	34.8
87.5°	8.7	9.4	9.8	9.8	10.2	10.2	11.6	11.6	12.7	13.8	15.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1
2.5°	885.0	882.4	879.5	874.4	868.3	865.0	859.9	856.7	850.2	844.7	838.9
5°	923.4	914.0	905.3	894.0	881.7	873.7	864.3	853.8	842.9	831.7	819.3
7.5°	961.8	946.2	929.2	911.4	894.0	877.7	862.5	846.9	832.7	815.0	800.1
10°	1000.6	979.6	957.1	930.6	904.9	882.4	859.6	839.6	819.3	797.6	778.4
12.5°	1039.4	1009.7	975.6	945.9	913.6	885.3	857.4	830.6	803.7	779.1	755.9
15°	1053.5	1028.9	999.5	958.2	923.4	886.0	850.5	817.5	786.7	759.9	731.6
17.5°	1067.3	1035.8	1004.6	964.7	919.4	879.2	838.9	803.0	768.9	735.2	709.5
20°	1070.6	1037.9	1005.0	966.2	919.4	871.5	831.3	786.0	748.6	713.5	680.1
22.5°	1069.5	1031.4	994.8	954.6	909.2	866.1	815.3	768.9	727.6	693.2	658.0
25°	1061.5	1022.0	977.0	936.8	891.8	845.1	795.8	747.9	706.6	667.1	632.6
27.5°	1056.8	1006.8	957.5	911.1	867.9	824.8	776.9	727.6	682.3	642.1	610.2
30°	1046.3	990.1	932.8	883.9	839.3	797.6	753.0	705.1	657.3	618.1	583.3
32.5°	1036.9	969.1	907.8	853.4	805.6	765.3	725.1	680.1	633.4	593.5	558.7
35°	1024.2	948.4	879.2	819.0	768.6	726.9	692.4	650.0	606.9	568.5	535.1
37.5°	1009.3	921.6	848.3	785.6	730.9	687.4	654.7	621.8	578.6	540.9	511.2
40°	991.2	892.6	813.9	749.4	692.1	646.4	616.7	585.9	551.4	517.0	485.1
42.5°	968.3	866.5	779.1	708.4	651.8	607.6	576.1	551.1	521.7	490.2	461.1
45°	939.3	833.8	741.0	666.3	609.1	565.2	532.9	513.4	490.5	460.1	435.0
47.5°	900.9	796.9	701.1	623.9	564.8	524.2	493.4	474.2	457.5	433.6	410.0
50°	846.2	754.4	657.3	580.8	521.7	480.7	452.8	435.8	422.0	404.6	385.4
52.5°	784.9	701.1	614.1	538.7	480.4	440.1	412.9	398.4	387.6	376.3	357.5
55°	719.3	646.8	564.1	492.3	438.3	398.8	374.9	361.8	352.4	343.0	331.4
57.5°	648.6	589.8	514.1	447.0	397.0	360.0	337.5	324.1	316.5	311.4	304.2
60°	573.2	524.6	461.5	401.7	353.1	321.2	299.5	289.7	283.5	279.5	274.4
62.5°	503.2	465.5	408.2	354.9	314.0	284.2	265.4	256.0	250.2	248.7	244.7
65°	434.7	403.9	355.6	310.3	274.1	248.3	232.0	223.0	219.3	217.2	217.5
67.5°	365.8	345.9	305.6	265.7	236.0	213.2	199.8	192.9	191.1	187.8	187.8
70°	303.8	289.7	257.0	223.3	197.6	180.9	169.3	162.1	160.2	158.8	158.4
72.5°	249.1	237.1	209.9	184.5	162.1	147.9	138.9	135.2	132.0	131.2	131.2
75°	195.4	188.5	166.0	144.7	128.7	118.5	112.0	108.0	105.9	105.5	105.9
77.5°	147.6	141.0	125.4	109.5	99.0	91.0	84.8	83.7	80.8	81.2	80.5
80°	104.4	100.4	91.4	79.4	71.1	64.5	61.6	59.1	58.4	57.3	58.4
82.5°	68.5	64.2	58.7	52.2	45.7	42.4	39.5	39.2	38.8	38.4	38.4
85°	37.3	37.7	34.1	28.3	25.4	23.2	21.4	21.4	21.0	20.7	21.0
87.5°	16.0	15.2	13.8	12.7	10.9	9.8	9.4	9.8	8.7	8.3	8.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1	854.1
2.5°	835.6	831.7	828.4	821.1	817.2	811.7	807.4	812.1	807.0	809.2	805.9
5°	813.2	803.0	795.8	785.3	776.2	767.9	761.7	760.6	757.7	756.3	751.9
7.5°	786.3	774.7	762.8	749.7	738.9	727.3	720.4	713.8	709.8	704.8	700.8
10°	763.1	746.1	731.6	714.9	700.4	687.7	677.6	672.5	667.8	660.9	658.4
12.5°	734.5	716.7	698.2	680.1	666.3	651.8	643.5	635.2	632.3	624.3	623.9
15°	712.7	686.3	668.9	650.8	631.5	619.9	612.7	604.4	600.7	595.3	591.3
17.5°	685.9	662.0	640.2	621.8	604.4	594.9	585.5	579.7	573.5	569.5	563.0
20°	656.2	633.7	612.0	592.0	579.3	568.1	560.8	555.4	548.9	547.1	540.5
22.5°	631.2	605.8	585.1	569.2	555.0	542.0	534.0	530.8	526.8	520.2	520.2
25°	603.6	577.9	560.1	543.4	531.1	519.5	514.1	509.4	505.0	501.0	499.6
27.5°	580.4	557.6	535.8	520.6	510.1	499.2	494.5	488.3	485.1	481.8	477.5
30°	555.8	532.2	513.7	499.2	487.6	478.2	473.1	469.1	466.2	463.3	461.1
32.5°	530.4	509.0	491.2	477.1	465.5	459.0	454.6	452.1	448.8	445.2	442.3
35°	508.6	484.7	467.3	455.0	445.9	440.5	435.4	432.9	429.2	429.2	426.3
37.5°	482.9	461.9	446.3	435.0	427.1	422.0	416.2	414.7	412.2	410.8	409.7
40°	460.4	441.2	426.7	415.5	406.8	402.8	398.4	395.5	394.1	392.3	391.5
42.5°	437.2	419.1	405.3	395.2	387.9	384.7	380.7	378.9	375.6	373.1	372.7
45°	413.7	395.9	383.2	374.9	368.3	364.4	361.8	357.5	356.0	353.1	352.7
47.5°	391.9	374.5	361.8	354.9	349.1	346.2	342.2	337.5	335.7	333.9	333.5
50°	366.9	351.3	339.7	333.2	327.7	323.0	319.0	316.1	315.0	315.0	315.8
52.5°	341.5	328.8	319.4	311.1	306.0	300.9	297.3	295.8	294.0	296.2	297.6
55°	316.9	303.4	296.2	288.6	283.5	277.7	275.9	275.2	274.1	277.0	278.4
57.5°	290.4	281.3	272.6	264.7	260.3	256.7	253.8	253.4	255.6	256.3	260.7
60°	265.4	254.5	246.9	241.1	235.6	233.5	232.7	232.0	233.5	237.5	243.6
62.5°	237.8	229.5	221.1	217.2	213.5	209.5	209.5	210.3	213.5	218.2	224.4
65°	211.0	203.4	197.9	192.9	189.6	187.4	188.2	189.6	192.9	199.0	205.9
67.5°	183.4	178.4	173.3	168.6	165.3	165.7	166.0	167.9	171.8	179.1	185.6
70°	157.0	151.2	147.2	145.4	142.8	141.4	143.6	147.2	150.5	157.0	162.4
72.5°	130.5	125.8	122.9	121.8	121.1	120.0	120.4	124.4	129.1	135.6	142.1
75°	104.4	102.6	100.4	99.0	97.9	98.6	99.3	103.0	106.6	113.5	120.7
77.5°	80.8	78.7	77.2	76.9	76.1	76.5	78.3	81.2	84.8	89.9	95.7
80°	57.6	56.9	56.2	55.8	55.8	56.2	59.1	60.9	64.2	68.9	73.2
82.5°	38.1	37.7	37.7	37.7	38.1	38.1	39.5	42.1	44.6	47.9	51.5
85°	22.1	21.4	22.5	22.8	22.1	23.2	23.9	25.4	26.5	28.3	30.1
87.5°	9.1	9.8	9.4	9.8	9.8	10.5	10.2	11.6	12.3	13.1	12.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	854.1	854.1	854.1	854.1
2.5°	803.7	806.3	804.1	807.0
5°	750.1	746.8	749.0	747.6
7.5°	700.4	697.5	693.2	691.7
10°	654.4	650.4	650.0	647.5
12.5°	620.7	617.0	612.0	611.2
15°	589.1	586.2	583.7	585.9
17.5°	562.3	559.8	559.0	556.9
20°	537.3	535.5	536.2	531.5
22.5°	517.3	513.4	512.6	512.6
25°	496.3	494.5	492.7	494.5
27.5°	477.8	476.0	475.3	475.6
30°	461.1	457.5	457.9	457.5
32.5°	443.0	440.8	440.1	439.4
35°	425.3	425.3	423.4	423.4
37.5°	408.9	408.6	407.5	408.2
40°	390.1	389.7	388.6	386.5
42.5°	372.0	370.5	370.2	369.8
45°	352.7	352.7	352.0	351.7
47.5°	333.9	334.6	336.1	335.7
50°	317.2	317.6	318.7	319.0
52.5°	298.7	301.3	302.7	302.4
55°	281.7	284.2	286.8	287.1
57.5°	264.7	267.9	270.5	271.2
60°	247.3	252.0	255.2	256.7
62.5°	230.6	236.0	239.3	239.3
65°	212.1	217.5	220.4	222.6
67.5°	192.9	198.3	201.2	203.0
70°	171.5	176.9	181.3	182.7
72.5°	150.5	155.2	158.4	160.2
75°	125.4	132.0	135.2	137.0
77.5°	101.5	108.0	109.8	110.9
80°	77.6	81.2	83.7	84.1
82.5°	55.1	58.0	58.4	59.5
85°	32.6	34.1	34.4	34.1
87.5°	13.4	13.1	13.1	13.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)